

WHAT IS CLAIMED IS:

1. A field-measuring system used at a control processing field, includes:
  - a plurality of energy converters for sensing processing variables at the control processing field, and outputting electric signals in response to said processing variables;
  - a processing controller having a multi-port input interface to receive said electric signals, said processing controller processing said electric signals and outputting digital data corresponding to said processing variables based on a single-chip microprocessor;
  - a personal digital assistant (PDA) for executing a driver software to receive said digital data and display the messages related to said processing variables; and
  - a communication interface for transmitting said digital data from said processing controller to said PDA.
2. The field-measuring system according to Claim 1, wherein said energy converters include a temperature sensor, pressure sensor or flow sensor.
3. The field-measuring system according to Claim 1, wherein said processing variables may be the temperature, pressure or flow volume of a fluid.
4. A field-measuring controller used at a pipeline fluid control field, includes:
  - a multi-port interface circuit for receiving analog signals outputted by a plurality of energy converters which are used to sense the processing variables at the pipe fluid control field;
  - an analog-to-digital converter circuit for converting the analog signals into digitalized electric signals;
  - a single-chip microprocessor for receiving said electric signals and outputting data corresponding to said processing variables;
  - a communication interface circuit for transmitting the data to a PDA, so that said PDA displays data message related to said processing variables.
5. The field-measuring system according to Claim 4, wherein the energy

converters are temperature sensors, pressure sensors or flow sensors.

6. The field-measuring system according to Claim 4, wherein the processing variables are the temperature, pressure or flow volume of a pipeline fluid.
7. A field-measuring control method used at a pipeline fluid control field, includes the following steps:
  - processing variables at the control processing field are sensed and analog signals in response to said processing variables are obtained;
  - said analog signals are converted to digitalized electric signals;
  - said electric signal are calculated and the data corresponding to said processing variables are obtained;
  - said data is transmitted to a personal digital assistant; and
  - said personal digital assistant installed with a driver receives said data and displays messages related to said processing variables.